



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,774	01/18/2001	Joseph M. Cannon	CANNON 115-104	5953
7590	01/29/2008		EXAMINER	
WILLIAM H. BOLLMAN			TRAN, TUAN A	
MANELLI DENISON & SELTER PLLC				
2000 M STREET, NW			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20036-3307			2618	
			MAIL DATE	DELIVERY MODE
			01/29/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/761,774  
Filing Date: January 18, 2001  
Appellant(s): CANNON ET AL.

**MAILED**

**JAN 29 2008**

**Technology Center 2600**

---

William H. Bollman  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 10/05/2007 appealing from the Office action  
mailed 11/09/2006

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

a. Whether claims 1-14 and 16-23 are obvious over U.S. Pat. No. 6,490,439 to Croft et al. ("Croft") in view of U.S. Pat. No. 6,127,936 to Gendel et al. ("Gendel") and further in view of U.S. Pat. No. 5,711,004 to Blasiak et al. ("Blasiak") or U.S. Pat. No. 6,311,982 to Lebensfeld et al. ("Lebensfeld").

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,490,439	CROFT et al.	12-2002
6,127,936	GENDEL et al.	10-2000
5,711,004	BLASIAK et al.	01-1998
6,311,982	LEBENSFELD et al.	11-2001

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-14 and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Croft et al. (6,490,439) in view of Gendel et al. (6,127,936) and further in view of Blasiak et al. (5,711,004) or Lebenscheld et al. (6,311,982).

Regarding claims 16 and 23, Croft discloses an apparatus for optimizing link quality of a wireless piconet device to a user comprising: means for firstly determining a digital link quality (i.e., received signal strength) of an established connection with other wireless piconet device within a short range (i.e., Bluetooth) piconet network by exchanging wireless signals (establishing a present in a piconet network); and means for providing a first indication of the digital link quality to the user (See figs. 8-11 and Abstract, col. 8 line 5 to col. 10 line 12). However, Croft does not mention means for

only providing an indication of an amount of quality achieved above an acceptable level, wherein the acceptable level is determined by comparing the digital link quality and a minimum digital link quality threshold and the amount of quality achieved above the acceptable level is determined by an amount the digital link quality exceeds the minimum digital link quality threshold, and wherein the minimum digital link quality threshold is configurable by a user. Gendel teaches an apparatus for providing an indication of the magnitude of a quality (i.e., received signal strength) comprising means for providing an indication of an amount of quality achieved above an acceptable level ("valid reception") (See col. 5 lines 1-30), wherein the acceptable level is determined by comparing the digital link quality and a minimum digital link quality threshold (minimum level for a valid reception, -95 dBm for example, as well as for activating the visual or audible indicator) and the amount of quality achieved above the acceptable level is determined by an amount the digital link quality exceeds the minimum digital link quality threshold (See fig. 1-3 and col. 4 line 54 to col. 7 line 4). Since both Croft and Gendel teach about apparatuses that are capable of providing visual indication that conveys information to a user such as signal quality; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Gendel's teachings in modifying the apparatus as disclosed by Croft by configuring the apparatus to provide the indication of the amount of quality achieved above the acceptable level to the user for the advantage of indicating a best reception location to the users so they can take further actions. Further since adaptive signal quality (e.g. signal strength) threshold, set by a user for a wireless communication device to perform a particular

function based on the signal quality, is a common practice in the art as taught by Blasiak (See col. 5 lines 16-30) or Lebensfeld (See fig. 5 and col. 10 lines 46-65); therefore, it would have been obvious to one skilled in the art at the time the invention was made to apply the teaching of Blasiak or Lebensfeld in modifying the apparatus as disclosed by Croft & Gendel with a user-selected threshold for the advantage of providing the user a higher degree of freedom in setting up operational parameters of the device.

Claims 7 and 14 are rejected for the same reasons as set forth in claims 16 and 23, as method.

Claims 1 and 4 are rejected for the same reasons as set forth in claims 16 and 23.

Regarding claim 17, Croft & Gendel & Blasiak or Lebensfeld disclose as cited in claim 16. Croft further discloses the apparatus varies visual indication according to the received signal strength (See fig. 11 and col. 9 line 61 to col. 10 line 3), and the received signal strength varies dependent upon locations of the receiving wireless piconet device; therefore the apparatus inherently comprises means for allowing the user to physically move the wireless piconet device; means for secondly determining the acceptable level of the at least one aspect of the digital link quality.

Claim 8 is rejected for the same reasons as set forth in claim 17, as method.

Regarding claims 18-19, Croft & Gendel & Blasiak or Lebensfeld disclose as cited in claim 16. Croft further discloses the apparatus comprises: a processor coupled to the transceiver, the processor adapted to vary the visual indication; and a memory

unit coupled to the processor, the memory unit for storing instructions executed by the processor for varying the visual indication (See fig. 9 and col. 12 lines 28-35).

Therefore the apparatus inherently comprises means for generating a Read\_RSSI command or a Get\_Link\_Quality command (command for measuring the signal strength) as well as means for retrieving a link quality value returned in response to the command.

Claims 9-10 are rejected for the same reasons as set forth in claims 18-19, as method.

Regarding claim 20-21, Croft further discloses the wireless connection is a piconet connection or a scatternet connection (See fig. 8).

Claims 11-12 are rejected for the same reasons as set forth in claims 20-21, as method.

Regarding claim 2, Croft & Gendel & Blasiak or Lebensfeld disclose as cited in claim 1. Croft further discloses the piconet front end conforms to Bluetooth standards. (See figs. 8-9 and col. 8 line 5 to col. 9 line 2).

Regarding claim 5, Croft further discloses the visible user link quality indicator comprises an LED (See col. 10 lines 4-12).

Regarding claim 22, Croft & Gendel & Blasiak or Lebensfeld disclose as cited in claim 16. Gendel further discloses the indication can be audible (See fig. 2 and col. 6 lines 7-15).

Claims 13 is rejected for the same reasons as set forth in claim 22, as method.

Claim 3 is rejected for the same reasons as set forth in claim 22.

Regarding claim 6, Croft & Gendel & Blasiak or Lebensfeld disclose as cited in claim 4. However, they do not mention that the visible variable user link quality indicator comprises a graphical display. Graphical display is common in the art, therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use graphical display for the advantage of expanding the capability of the system to various types of display.

#### **(10) Response to Argument**

With respect to the appellant's argument filed on 10/05/2007, the response(s) are follows:

The appellant mainly argued throughout the appellant's argument that Croft, in view of Gendel, Blasiak and Lebensfeld, still fails to disclose or suggest a system and method that determines an amount of "quality achieved beyond that of an acceptable level necessary to establish a present in a piconet network, said acceptable level being configurable by a user of said wireless piconet device" (claim 1), and provides for an indication of a quality above an acceptable level, as recited in claims 1-14 and 16-23 (See Appeal Brief, Argument section, page 5-8). The examiner respectfully disagrees with the appellant's argument. In this instant case, Croft discloses an apparatus for optimizing link quality of a wireless piconet device to a user comprising: means for firstly determining a digital link quality (i.e., received signal strength) of an established connection with other wireless piconet device within a short range (i.e., Bluetooth) piconet network by exchanging wireless signals (establishing a present in a piconet network); and means for providing a first indication of the digital link quality to the user

(See figs. 8-11 and Abstract, col. 8 line 5 to col. 10 line 12) and Gendel teaches an apparatus for providing an indication of the magnitude of a quality (i.e., received signal strength) comprising means for providing an indication of an amount of quality achieved above an acceptable level ("valid reception") (See col. 5 lines 1-30), wherein the acceptable level is determined by comparing the digital link quality and a minimum digital link quality threshold (minimum level for a valid reception, -95 dBm for example, as well as for activating the visual or audible indicator) and the amount of quality achieved above the acceptable level is determined by an amount the digital link quality exceeds the minimum digital link quality threshold (See fig. 1-3 and col. 4 line 54 to col. 7 line 4). Since both Croft and Gendel teach about apparatuses that are capable of providing visual indication that conveys information to a user such as signal quality (i.e. received signal strength); therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Gendel's teachings in modifying the apparatus as disclosed by Croft by configuring the apparatus to provide the indication of the amount of quality achieved above the acceptable level to the user for the advantage of indicating a best reception location to the users so they can take further actions. Further, since the concept of configuring a wireless communication device with a user-selected signal quality threshold to perform a particular function based on the signal quality is known in the art as taught by Blasiak (See col. 5 lines 16-30) or Lebensfeld (See fig. 5 and col. 10 lines 46-65); it would have been obvious to one skilled in the art at the time the invention was made to apply the teaching of Blasiak or Lebensfeld in modifying the apparatus as disclosed by Croft & Gendel with a user-

selected threshold for the advantage of providing the user a higher degree of freedom in setting up operational parameters of the device. Therefore, Croft & Gendel in view of Blasiak or Lebensfeld would arrive to the claimed subject matters as recited in claims 1-14 and 16-23.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Tuan Tran

January 6, 2008

Conferees:



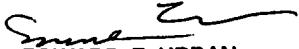
MATTHEW ANDERSON  
SUPERVISORY PATENT EXAMINER

Matthew D. Anderson – Supervisory Patent Examiner

Application/Control Number:  
09/761,774  
Art Unit: 2618

Page 10

Edward Urban – Supervisory Patent Examiner

  
EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

ATTN: MANELLI DENISON & SELTER PLLC  
2000 M Street, N.W. 7<sup>th</sup> Floor  
Washington D.C. 20036-3307  
Tel. (202) 261-1020  
Fax. (202) 887-0336